UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Rangeland

Site ID: R070XD153NM

Site Name: Loamy

Precipitation or Climate Zone: 13 to 18 inches

Phase:

PHYSIOGRAPHIC FEATURES

Narrative:

This site occurs on level to gently sloping plains and terraces at elevations ranging from 4,000 to 7,000 feet above sea level. Slopes vary from 0 to 9 percent but average less than 5 percent.

Land Form:

1. Plains
2. Terraces
3.

Aspect:

1. N/A
2.
3.

	Minimum	Maximum
Elevation (feet)	4,000	7,000
Slope (percent)	0	9
Water Table Depth (inches)	N/A	N/A

Flooding:	**Minimum**	**Maximum**
Frequency	N/A	N/A
Duration	N/A	N/A

Ponding:	**Minimum**	**Maximum**
Depth (inches)	N/A	N/A
Frequency	N/A	N/A
Duration	N/A	N/A

Runoff Class:

Negligible to medium.

CLIMATIC FEATURES

Narrative:

The climate of this area is "semi-arid continental."

Annual average precipitation ranges from 13 to 18 inches. Variations of 5 inches, more or less, are not uncommon. Approximately 70 percent of the precipitation occurs from May through October. Most of the summer rain comes in the form of high-intensity, short-duration thunderstorms. Winter moisture is usually negligible.

Distinct seasonal changes and large annual and diurnal temperature changes characterize temperatures. The average annual temperature ranges from 55 degrees F to 60 degrees F, with extremes of 20 degrees F below zero in the winter to 110 degrees F in the summer not uncommon.

The average frost-free season is 180 to 200 days. The last killing frost is in early April and the first killing frost is in mid October.

Both temperature and precipitation favor warm-season perennial plant communities. At higher elevations, 40 percent of the precipitation is favorable for cool-season growth. Strong winds from the west and southwest blow from February through June. This accelerates the drying of the soil during a critical growth period for most cool-season plants.

Climate data was obtained from http://www.wrcc.sage.dri.edu/summary/climsmnm.html web site using 50% probability for freeze-free and frost-free seasons using 28.5 degrees F and 32.5 degrees F respectively.

	Minimum	Maximum
Frost-free period (days):	160	191
Freeze-free period (days):	180	221
Mean annual precipitation (inches):	13	18

Monthly moisture (inches) and temperature (^{0}F) distribution:

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	.47	.56	21.4	56.6
February	.50	.54	23.8	62.1
March	.49	.57	28.5	68.5
April	.54	.60	35.0	76.7
May	1.13	1.44	43.2	83.5
June	1.78	1.84	51.6	92.2
July	1.87	2.98	55.7	92.1
August	2.29	3.26	54.2	90.3
September	2.67	2.80	48.2	84.3
October	1.24	1.40	37.6	76.7
November	.53	.55	27.5	65.5
December	.60	.68	21.6	57.8

Climate Stations:

				Period		
Station ID	292865	Location	Elk 2E	From:	6/1/1895	To: 12/31/00
Station ID	294112	Location	Hope	From:	03/01/19	To: 12/31/00

INFLUENCING WATER FEATURES

Narrative:

This site is not influenced by water from a wetland or stream.

Wetland description:

System	Subsystem	Class
N/A		

If Riverine Wetland System enter Rosgen Stream Type:

N/A

REPRESENTATIVE SOIL FEATURES

Narrative:

The soils on this site are moderately deep to deep, well drained. The surface textures are loam, silt loams, silty clay loams and fine sandy loams. Permeability is slow to moderately rapid and available water-holding capacity is medium to high with surface runoff medium. The water and wind erosion hazard is high.

Parent Material Kind: Alluvium
Parent Material Origin: Mixed

Surface Texture:

1. Loam
2. Silt loam
3. Silty clay loam
4. Fine sandy loam

Surface Texture Modifier:

1. N/A
2.
3.

Subsurface Texture Group: Clayey
Surface Fragments <=3" (% Cover): N/A
Surface Fragments >3" (% Cover): N/A

Subsurface Fragments <=3" (%Volume): N/A
Subsurface Fragments >=3" (%Volume): N/A

	Minimum	Maximum
Drainage Class:	Well	Well
Permeability Class:	Slow	Moderately rapid
Depth (inches):	20	40
Electrical Conductivity (mmhos/cm):	0.00	2.00
Sodium Absorption Ratio:	N/A	N/A
Soil Reaction (1:1 Water):	7.4	8.4
Soil Reaction (0.1M CaCl2):	N/A	N/A
Available Water Capacity (inches):	6	12
Calcium Carbonate Equivalent (percent):	N/A	N/A

PLANT COMMUNITIES

Ecological Dynamics of the Site:

Plant Communities and Transitional Pathways (diagram)

Plant Community Name: Historic Climax Plant Community

Plant Community Sequence Number: 1 **Narrative Label**: HCPC

Plant Community Narrative: Historic Climax Plant Community
This site is dominated by warm-season short and mid grasses in scattered colonies. Shrubs and half-shrubs are common but scattered. Forbs make up an important part of the community, but production fluctuates greatly from season to season and year to year. Production and composition vary greatly with elevation.

Canopy Cover:	
Trees and shrubs	2 %
Ground Cover (Average Percent of Surface Area).	
Grasses & Forbs	37
Bare ground	32
Surface cobble and stone	1
Litter (percent)	25
Litter (average depth in cm.)	3

Plant Community Annual Production (by plant type):

Annual Production (lbs/ac)

Plant Type	Low	RV	High
Grass/Grasslike	624	897	1,170
Forb	64	92	120
Tree/Shrub/Vine	64	92	120
Lichen			
Moss			
Microbiotic Crusts			
Total	800	1,150	1,500

Plant Community Composition and Group Annual Production:

Plant Type - Grass/Grasslike

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
1	BOGR2	Blue Grama	58 – 403	58 – 403
2	BOCU	Sideoats Grama	58 – 173	58 – 173
3	BOER4	Black Grama	115 – 403	115 – 403
4	PLMU3	Tobosa	115 – 403	115 – 403
5	SPCR	Sand Dropseed	35 – 58	35 – 58
6	PAOB	Vine-mesquite	58 – 115	58 – 115
7	PASM	Western Wheatgrass	115 – 173	115 – 173
8	ARIST	Threeawn spp.	35 – 58	35 – 58
9	SCBR2	Burrograss	35 – 58	35 – 58
10	ERIN	Plains Lovegrass	58 – 115	58 – 115
11	2GRAM	Other Grasses	35 – 58	35 - 58

Plant Type - Forb

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
12	ACNA2	Desert Holly	12 – 35	12 – 35
13	SPHAE ERBL2 CROTO SENEC	Globemallow spp. Haplopappus spp. Croton spp. Groundsel spp.	35 – 58	35 – 58
14	2FORB	Other Forbs	12 – 35	12 - 35

Plant Type – Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
15	YUCCA	Yucca spp.	35 – 58	35 – 58
16	ATCA2	Fourwing Saltbush	35 – 58	35 – 58
17	ACGR	Catclaw Acacia	23 – 58	23 – 58
18	RHUA	Sumac spp.	23 – 58	23 – 58
19	GUSA2	Broom Snakeweed	23 – 58	23 – 58
20	2SD	Other Shrubs	12 – 35	12 - 35

Plant Type - Lichen

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Moss

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Microbiotic Crusts

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Other grasses which would appear on this site include: bottlebrush squirreltail, galleta, alkali sacaton, hairy grama, mat muhly, ring muhly, green sprangletop, Hall's panicum, plains bristlegrass, little bluestem, silver bluestem, Indiangrass, fluffgrass, buffalograss, wolftail, tridens spp., and needle grass.
Other shrubs include: cholla, juniper, pinyon, creosotebush, oak spp., broom baccharis, pricklypear, Apacheplume, dalea spp., winterfat, and algerita.
Other forbs include: wooly loco, wooly Indianwheat, cudweed, thistles, annual sunflowers, mullin, wildbuckwheat spp., nightshade spp., milkweed spp., and bladderpod.

Plant Growth Curves

Growth Curve ID **4603NM**

Growth Curve Name: **HCPC**

Growth Curve Description: **Mixed short/mid warm-season grassland with scattered shrubs and half-shrubs and a fluctuating forb component.**

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	0	3	5	10	10	25	30	12	5	0	0

ECOLOGICAL SITE INTERPRETATIONS

Animal Community:

Habitat for Wildlife:

This site provides habitat which supports a resident animal community that is characterized by pronghorn antelope, sparrow hawk, badger, black-tailed jackrabbit, black-tailed prairie dog, Botta's pocket gopher, burrowing owl, roadrunner, cactus wren, coyote, bobcat, scaled quail, horned lark, great plains toad, and horned lizard. Mule deer use this site seasonally as do mourning dove.

Hydrology Functions:

The runoff curve numbers are determined by field investigations using hydrologic cover conditions and hydrologic soil groups.

Hydrologic Interpretations	
Soil Series	**Hydrologic Group**
Ancho	B
Cale	B
Cuevoland	B
Gabaldon	B
Jarita	C
Kerrick	B
La Fonda	B
Montecito	C
Pena	B
Reeves Variant	B
Ruidoso	C
Rumuda	C
Shanta	B
Shanta Variant	B

Recreational Uses:

Recreation potential is limited largely by the lack of water and firewood. It is fairly suited for camping, hiking, and picnicking. The wide-open spaces and many colorful wildflowers that bloom during years of good moisture enhance esthetic appeal. Antelope, quail, dove and varmint hunting is good. Trapping for fur-bearing animals is good.

Wood Products:

At higher elevations pinyon and juniper offers firewood and fencing materials. Century plant and cholla skeletons are used for ornamental purposes.

Other Products:

Grazing:

This site is suited for grazing by all kinds and classes of livestock during all seasons of the year. However, because of the large percentage of grass in the potential plant community, this site is best suited for some type of cattle operation. Continuous yearlong or growing season grazing will cause a decrease in sideoats grama, black grama, vine-mesquite, and fourwing saltbush. A corresponding increase in broom snakeweed, cholla, sand dropseed, threeawns, burrograss, and forbs will follow. This site will respond well to a planned grazing system that rotates the season of use. Under retrogression, an increase in woody plants at lower elevations and forbs will cause a decrease in total ground cover. This can cause severe wind and water erosion, both rill and gully. In severe cases of gully erosion, expensive structural measures will be required to restore this site.

Other Information:

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month

Similarity Index	Ac/AUM
100 - 76	2.0 – 4.5
75 – 51	3.5 – 6.0
50 – 26	5.0 – 9.0
25 – 0	10.0+

Plant Part	Code	Species Preference	Code
Stems	S	None Selected	NS
Leaves	L	Preferred	P
Flowers	F	Desirable	D
Fruits/Seeds	F/S	Undesirable	U
Entire Plant	EP	Not Consumed	NC
Underground Parts	UP	Emergency	E
		Toxic	T

Plant Preference by Animal Kind:

Animal Kind: Livestock
Animal Type: Cattle

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Blue Grama	Bouteloua gracilis	EP	D	D	D	D	P	P	P	P	P	D	D	D
Sideoats Grama	Bouteloua curtipendula	EP	P	P	P	P	P	P	P	P	P	P	P	P
Western Wheatgrass	Pascopyrum smithii	EP	D	D	P	P	P	D	D	D	D	D	D	D
Vine-mesquite	Panicum obtusum	EP	D	D	D	D	D	D	D	D	D	D	D	D
Bottlebrush Squirreltail	Elymus elymoides	EP	U	U	D	D	D	U	U	U	D	D	D	U
Winterfat	Krascheninnikovia lanata	L/S	D	D	P	P	P	P	P	P	D	D	D	D
Fourwing Saltbush	Atriplex canescens	L/S	P	P	P	P	P	D	D	D	D	D	D	P

Animal Kind: Livestock
Animal Type: Sheep

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Blue Grama	Bouteloua gracilis	EP	D	D	D	D	P	P	P	P	P	D	D	D
Sideoats Grama	Bouteloua curtipendula	EP	P	P	P	P	P	P	P	P	P	P	P	P
Black Grama	Bouteloua eriopoda	EP	P	P	P	D	D	D	D	D	D	D	P	P
Fourwing Saltbush	Atriplex canescens	L/S	P	P	P	P	P	D	D	D	D	D	D	P
Western Wheatgrass	Pascopyrum smithii	EP	U	U	D	D	D	D	D	D	D	D	D	U

Animal Kind: Wildlife
Animal Type: Antelope

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Globemallow	Sphaeralcea spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Fourwing Saltbush	Atriplex canescens	L/S	D	D	D	D	D	D	D	D	D	D	D	D
Annual Sunflower	Helianthus annuum	EP	U	U	U	U	U	D	D	D	U	U	U	U

SUPPORTING INFORMATION

Associated sites:

Site Name	Site ID	Site Narrative

Similar sites:

Site Name	Site ID	Site Narrative

State Correlation:

This site has been correlated with the following sites: _____

Inventory Data References:

Data Source	# of Records	Sample Period	State	County

Type Locality:

State: **New Mexico**

County: **Chavez, Eddy, Lincoln, Otero**

Latitude: _____

Longitude: _____

Township: _____

Range: _____

Section: _____

Is the type locality sensitive? **Yes** ☐ **No** ☐

General Legal Description: _____

Relationship to Other Established Classifications:

Other References:

Data collection for this site was done in conjunction with the progressive soil surveys within the Pecos-Canadian Plains and Valleys 70 Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys: Otero, Eddy, Chaves, Lincoln

Characteristic Soils Are:	
Ancho, Cale, Cuevoland, Gabaldon, Jarita	Kerrick, La Fonda, Montecito, Pena, Reeves
Ruidoso, Rumuda, Shanta, Shanta Variant	
Other Soils included are:	

Site Description Approval:

Author	Date	Approval	Date
Don Sylvester	02/02/82	Donald H. Fulton	03/03/82

Site Description Revision:

Author	Date	Approval	Date
Elizabeth Wright	07/10/02	George Chavez	12/17/02